



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/668,410

09/23/2003

Scott R. Culler

59038US002

2023

32692

7590

04/19/2007

3M INNOVATIVE PROPERTIES COMPANY

PO BOX 33427

ST. PAUL, MN 55133-3427

EXAMINER

MARCHESCHI, MICHAEL A

ART UNIT

PAPER NUMBER

1755

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
--	-------------------	---------------

3 MONTHS

04/19/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/19/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com

LegalDocketing@mmm.com

Office Action Summary

Application No.

10/668,410

Applicant(s)

CULLER ET AL.

Examiner

Michael A. Marcheschi

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1755

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The subject matter added to claim 19 and 26 in the amendment dated 1/30/07 is clearly supported by figure 5.

- (I) Claims 19-20, 22-23, 25-27, 29-30 and 32 are rejected under 35 U.S.C. 102(b) as anticipated by Pieper et al. (5,152,917), as evidenced by Naujok (6,761,620) and Flood et al. (5,484,330) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Pieper et al. (5,152,917) in view of Naujok (6,761,620) and Flood et al. (5,484,330) for the same reasons set forth in the previous office action which are incorporated herein by reference.
- (II) Claims 19-20, 22-27 and 29-32 are rejected under 35 U.S.C. 103(a) as obvious over Pieper et al. (5,152,917) in view of Kaisaki et al. (6,194,317) or Adefris et al. (6,319,108) for the same reasons set forth in the previous office action which are incorporated herein by reference.
- (III) Claims 21, 24, 28 and 31 are rejected under 35 U.S.C. 103(a) as obvious over Pieper et al. (5,152,917) in view of Naujok (6,761,620) and Flood et al. (5,484,330), as applied to claims 19 and 26 above and further in view of Gagliardi et al. (235) for the same reasons set forth in the previous office action which are incorporated herein by reference.
- (IV) Claims 21 and 28 are rejected under 35 U.S.C. 103(a) as obvious over Pieper et al. (5,152,917) in view of Kaisaki et al. (6,194,317) or Adefris et al. (6,319,108), as applied to claims 19 and 26 above and further in view of Gagliardi et al. (235) for the same reasons set forth in the previous office action which are incorporated herein by reference.

Art Unit: 1755

Applicant's arguments filed 1/30/07 have been fully considered but they are not persuasive.

With respect to rejection (I) above, applicants appear to argue that Pieper et al. does not teach the claimed invention because it appears that the reference sawtooth shape is colinear to a side. The characterization of Pieper et al. by the examiner is that it discloses an abrasive array of protruding units of saw toothed shaped composites (distal linear apex for each unit, when projected onto a plane with its respective base, extend between non-central points on opposite first and second sides). The saw tooth shapes of the primary reference does not necessarily mean the side is 90 degrees or orthogonal to the base. These saw tooth shapes, as disclosed by Pieper et al., are not limited to any particular form and thus it is the examiners position that these read on the claimed saw tooth shape that includes embodiments wherein the distal region is not on a plane orthogonal to the base, as is evidenced by the secondary references. With this being apparent, the offset vectors can be in the same direction and the same distance from a second side edge. This characterization, therefore reads on the claimed structure of abrasive array.

In the alternative, the 2 secondary references clearly disclose that saw tooth shapes includes embodiments wherein the distal region is not on a plane orthogonal to the base. One skilled in the art would have appreciated and found obvious that since this is a general structure of a saw tooth, the saw tooth shape of the primary reference could necessarily encompass features that read on the claims (distal region is not on a plane orthogonal to the base). The saw toothed shapes of the primary reference does not necessarily mean the side is 90 degrees or orthogonal to the base. These saw tooth shapes, as disclosed by Pieper et al., are not limited to any particular form and thus it is the examiners position that these make obvious the claimed saw

Art Unit: 1755

tooth shape that includes embodiments wherein the distal region is not on a plane orthogonal to the base, as is clearly depicted by the secondary references. This is apparent because saw tooth shapes are generally not orthogonal to the base, as shown by the secondary references.

Applicants show no evidence that the saw tooth shapes of the primary reference mean the side is 90 degrees or orthogonal to the base. In this alternative rejection, applicants provide no clear arguments against the combination, as applied.

In view of the above, the limitations of the claimed abrasive array are met because the composites defined have 4 sides and a linear region offset from the first and third sides.

In the response, applicants appear to be focusing on the two by two array, as claimed, and state that figure 9 does not disclose a 2 by 2 array but rather a 4 by 1 array and that figure 8 does not clearly show the claimed array. After further review, the examiner agrees, that these figures do not clearly show a 2 by 2 array, however, the reference clearly states that in column 8, lines 16-20 and column 8, lines 35-38 that the shape and periods or number of composites per unit area is varied depending upon the abrading applications. In addition, the reference states in column 6, lines 46-50 that the abrasive composites have at least one predetermined shape (sawtooth being disclosed as an abrasive composite-see figures 8 and 9 and the descriptions thereof) and are disposed in a predetermined array. It is further stated that the shape will repeat with a certain periodicity and that the repeating shape can be in two directions. In view of this, the teachings in column 8, lines 16-20 and column 8, lines 35-38 coupled with the teachings in column 6, lines 46-50 clearly depict a 2 by 2 array.

With respect to the argument based on rejections that apply Naujok and Flood et al., all applicants argue is that neither of these two reference teach a 2 by 2 array. The examiner

Art Unit: 1755

acknowledges this and has not applied these references for this teaching and thus applicants have not clearly argued the examiners reasons for combining.

With respect to rejection II above, applicants argue that neither Kaisaki et al. nor Adefris et al. have protruding units with a distal linear region that extends across the with of the unit. The examiner has not applied these reference for this teaching and thus applicants have not clearly argued the examiner reasons for combining.

With respect to rejections III and IV above, applicants only state that the use of Gagliardi et al. does not remedy the deficiencies of the base reference. This is not a clear argument because applicants fail explicitly argue the examiners reasons for the combination.

The rejections based on Application No. 10/668,799 are withdrawn because this application is abandoned.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

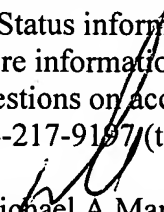
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 1755

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael A Marcheschi
Primary Examiner
Art Unit 1755

2/07
MM